CENTRAL OKLAHOMA GROTTO
OF THE NATIONAL SPELEOLOGICAL SOCIETY,INC

C.O.G.nizance

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The March meeting will be Friday, March 9, 2018 at 7:30 p.m. at the home of the John Talbot. Thanks John.

WIDE OPEN SPACES!

COMING THROUGH

ANYONE LEAVE THEIR TEETH>

ALL PICTURES TAKEN BY JON WOLTZ INSIDE AND AROUND PROSPECT CAVE.

ANNOUNCEMENTS

*Northwest trips are scheduled the third Saturday of every month. Contract Sue or John Bozeman for details.

*The March meeting will be Friday, March 9, 2018 at the home of John Talbot.

WHITE-NOSE SYNDROME DECONTAMINATION PROTOCOL, APRIL 2016

This is the latest formal revision of the national decontamination protocol to prevent spread of the fungus that causes white-nose syndrome. This document is the product of a collaborative effort with multiple federal and state agencies and several non-governmental organizations.

Go to this website to view the detailed suggestions listed to help stop the spreading of WNS.

https://www.whitenosesyndrome.org/news/national-white-nose-syndrome-decontamination-protocol-april-2016

For the latest information about WNS visit this site: https://www.whitenosesyndrome.org/

MINUTES

CENTRAL OKLAHOMA GROTTO
Minutes of the meeting of February

Hosted by The Van Dykes

The meeting came to order at 8:06-8:09, depending on the watch consulted.
Attending: **Dale Amlee, John & Sue Bozeman, John & Elaine Talbot, Jason Talbot & Libby, CJ, Carole and Dale Town, Jalynne & friend Cole, Andrew, JT, John & Tammy Van Dyke, and Jon & Kelley Woltz**
Chairman Dale Amlee called for order and a review of **Old Business**, namely Bat Count.

Discussion revolved around Duane's calculations of the decreases in bat numbers at all three northern caves. Decreases were substantial, varying from 43% to 76% (see his report online), totaling about 70,000 bats. Reasons put forth were ongoing drought, the fire of 2016 and the great number of windmills for electrical generation that now line the horizons! Jester, conversely, had an increase of 3,000, or 23%. One year does not a trend make – we'll 'hope' the missing bats went elsewhere and will be back next year.

Andrew Van Dyke gave the Jester trip report. He mentioned that 25 bats were swabbed (nose and forearms) and the swabs put in a vial for transport to the analytical lab. He wrote up the count for class (read it in the newsletter).

Greene's Cathedral count was presented by Jon Woltz. He mentioned that he kept waiting to find the 'big mats' around the next corner … and ran out of corners.

Neither group saw any signs of WNS nor piles of dead bats or bat parts. If the reduction is caused by climate change, the bats may have found permanent alternate roosts.

New Business: Who will host March's meeting? We are losing our membership. Carol and Dale Town will be moving East within the year, most likely. Their beautiful home is now on the market. Golly, we'll miss them.

John Talbot has volunteered to double up from January and take March. Thank you, John and Elaine!

Trip Report: Jon had discussed the trip to Prospect Cave after the Greene's bat count. See the report for details.

Treasurer's Report: Provided by John Talbot. Upshot: we are solvent. And we would be more solventer if the several members who will be separately dunned would pay their dues!

Meeting adjourned: 8:52 p.m. Submitted by Sue Bozeman

TREASURER'S REPORTS

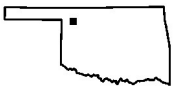
FEBRUARY, 2018 TREASURERS'S REPORT

INCOME			**EXPENSES**
Dues	$	24.00	
Dividends	$	0.01	
TOTAL	**$**	**24.01**	
CASH ON HAND	**$**	**68.05**	Balance as of **2/12/2018**
CHECKING	**$**	**221.05**	
SAVINGS	**$**	**2,163.96**	
TOTAL	**$**	**2,453.06**	

PREPARED BY TREASURER JOHN TALBOT

TRIP REPORT

Cave Trip Report : Prospect Cave
2/17/2018
Personnel: Dale Amlee, Sue Bozeman, Jon Woltz and Lil Town
Written by Lil Town



Yes, I planned a trip to Oklahoma on a surveying weekend. It had been way too long since I'd crawled around the inside a cave with other crazy friends that enjoy it too! Sue picked me up at the airport and I spent a few nights at the Bozeman B&B. Saturday we waited for Dale to arrive and took off for NW Oklahoma to meet Jon at the appointed gate. There was quite a breeze and chill in the air along with cattle impatiently looking at us wanting food. Once together we parked at the creek and took a short hike to the cave.

Looking back to the cars going to the cave.

Prospect Cave isn't the most glamorous looking cave, not yet anyway, but hey it's a cave! First of all I would like to thank Sue, Dale A. and Jon for their patience with me. I wasn't much help reading instruments or with book, but I was able to use the fancy laser distance meter. Remember a long time ago we discussed using them but were skeptical about how well they would work in a cave? They work. Sure makes measuring lefts and rights easier and more accurate for heights.

Lil trying to read instruments.

This was an unusual experience for me, a dry and dusty passage. Once in the cave and a tight crawl towards the last point, Jon had to refer to the notes where we could find the last point. I don't know if that passage has been named, but Rocky Road sounds good. Ouch! When the last point was located the fun began. I always admired the instrument readers for the uncomfortable positions they had to take at times to take readings, now I feel sorry for them. Didn't know how flexible they have to be.

Jon was practicing doing book with Sue tutoring him. Dale was doing fore sights and I tried to do back sights. Where are those numbers on the instruments? In order to get some footage done, Sue took over reading the instruments and I watched how she did it and checked on Jon's drawing. Altogether we added 237 feet and 4 inches. This passage didn't offer many excellent places to put survey points but at least we were able to walk some. The last point was an intersection of another possible passage and we shot a few readings from there. The survey was stopped here but it looks like the next trip will have some walking passage. Saw a few bats hanging around and we went back to the entrance.

Walking Passage ahead!

Side: Amlee and Lil leaving the cave. Bottom: Sue climbing down from entrance., no pictures of Jon, but he was there… He was taking all the pictures. Thanks Jon, for the proof I was there!

Dale

Once we were back to the

cars we went to see a neighboring land owner to say hi and visit while changing clothes. Many thanks for letting us use your house. Afterwards we went to a really nice Bistro and Pizza place for some dinner. (Think it was a truck stop) We said our goodbyes to Jon and the Sue took the us back to the city. Fun times.

POTPOURRI

Sinkhole in central Texas neighborhood reveals deep cave under 3 homes

by BETTIE CROSS, KEYE

http://wjla.com/news/offbeat/sinkhole-in-central-texas-neighborhood-reveals-deep-cave-under-3-homes

WILLIAMSON COUNTY, Texas (KEYE)- A sinkhole in Williamson County is exposing a 22-foot-deep cavern. New pictures show how far it reaches underneath three homes in the Brushy Creek neighborhood.

The hole opened up Thursday morning by Friday, geologists mapped the cave and are now calling it Cambria Cavern.

“We don't have sinkholes. This is Texas, this is Central Texas,” said Michelle Mitchell, who lives three doors down from the sinkhole.

Mitchell laughed in disbelief when she was first told a sinkhole had opened up into a cavern on her street. But after walking down to see it for herself, her reaction changed.

“It's scary,” said Mitchell.

On Friday Cambrian Environmental released new pictures of the cave. It's up to 22 feet deep and stretches for 170 feet. The entrance to the cave is next to water and gas lines. The three chambers of the cave extend east underneath three houses.

Mitchell’s home is by the smallest chamber that is eight feet deep.

“I want to know as a homeowner what to do to keep everything safe and keep the foundation secure,” said Mitchell. "We still don't know for sure whether it's in front of the house on the street, or if it is actually under the house."

Jenny Laseur lives near the cave, though her home is not directly over it.

"Is this the first of many, or the last of it," Laseur said.

Geologists from Cambrian Environmental spent Friday mapping the cave. A white line in the middle of Cambria Drive is the starting point. Other than the collapse area, the cave experts think the limestone is thick enough underneath the road to remain stable.

“There is at least five and one-quarter feet between the roadway and the cave, so there is some depth there,” said Connie Odom, spokesperson for Williamson County.

The geologists also gauged the integrity of the ceiling of the cave underneath these three homes.

“They do not feel concerned for the areas that are further back. They don't see that the ceiling in the areas further back have a disturbance,” said Odom.

Just a few miles away, you can spot tourists and field trip groups at Inner Space Cavern. "We have a lot of limestone, and with that we have a lot of caves," said Taunya Vessels, the cave's general manager.

There are hundreds of caves in Williamson County.

The inside of Inner Space Cavern will likely look a lot like the inside of the cave under the Brushy Creek neighborhood.

The biggest difference is the space between the cave and surface.

While the cave under the Brushy Creek neighborhood has a little more than five feet between the surface and cave, Inner Space Cavern has more than 33 feet.

"I don't really know much about that situation but when you have five feet that's not going to be as much strength as 33 feet," said Vessels.

For now, Mitchell and her family are staying put. “I'm fine with it. I'm not worried about it,” said Mitchell.

But she would like a list of the do’s and don’ts of living on top of a cave. She would also like to see Williamson County install underground reinforcements to keep another hole from opening up.

“There are caves everywhere," says Mitchell. "They are under roadways. They're everywhere you just don't always know it. I guess this is our lucky day."

On Monday, structural engineers will be brought in to determine the cave's stability.

Ancient Cave Paintings Clinch the Case for Neanderthal Symbolism

Scientific American

https://www.scientificamerican.com/article/ancient-cave-paintings-clinch-the-case-for-neandertal-symbolism1/

Once upon a time, in the dim recesses of a cave in what is now northern Spain, an artist carefully applied red paint to the cave wall to create a geometric design—a ladder-shaped symbol composed of vertical and horizontal lines. In another cave hundreds of kilometers to the southwest another artist pressed a hand to the wall and blew red paint around the fingers to create a stenciled handprint, working by the flickering firelight of a torch or oil lamp in the otherwise pitch darkness. In a third cave, located in the far south, curtainlike calcite formations were decorated i n shades of scarlet.

Although nothing of the artists themselves remains to establish their identity, archaeologists have long assumed cave painting was the sole purview of *Homo sapiens.* Another group of large-brained humans, the Neandertals, lived in the right time and place to be the creators of some of the cave art in Europe. But only *H. sapiens* had the cognitive sophistication needed to develop symbolic behavior, including art. Or so many experts thought.

Now dates obtained for the images in these three Spanish caves could put that enduring notion to rest. In a paper published this week in *Science,* researchers report some of the images are far older than the earliest known fossils of *H. sapiens* in Europe, implying they must have instead been created by Neandertals. The findings open a new window into the minds of these oft-maligned

(CONTINUED ON PAGE 5)

cousins of ours. They also raise key questions about the origin of symbolic thought, and what, exactly, distinguishes *H. sapiens* from other members of the human family.

The dating results come as a vindication long in the making for Neandertals, who have had an image problem ever since the early 1900s, when French paleontologist Marcellin Boule famously reconstructed a Neandertal skeleton from the site of La Chapelle-aux-Saints in France as an apelike brute. In the decades that followed scientists discovered that Neandertals were much more like us physically than Boule had surmised. They also found Neandertals and *H. sapiens* made the same kinds of stone tools for millennia—but the bad rap stuck.For a long time arguably the most significant point of distinction between Neandertals and modern humans seemed to be Neandertals did not make or use symbols. Whereas *H. sapiens* left behind jewelry, sculptures and cave paintings—all products of symbolic thought—no such items could be unequivocally attributed to Neandertals. In recent years, however, evidence for Neandertal symbolic behavior has been accumulating from sites throughout Europe. In Gibraltar a Neandertal engraved a hashtag symbol in the bedrock of a cave. In Croatia Neandertals harvested eagle talons and made them into necklaces. At sites in Gibraltar and Italy they hunted birds for their feathers, perhaps to wear as ceremonial headdresses and capes. In Spain, they made shell jewelry and mixed sparkly paint that they may have used as a kind of cosmetic. In a cave in France Neandertals erected semicircular walls of stalagmites, possibly for some ritual purpose. The list goes on.

Still, a key form of symbolic expression appeared to be missing from the Neandertal repertoire: rock art. The spectacular cave paintings of woolly rhinos, mammoths and other ice age animals at famous sites such as Chauvet and Lascaux in France, among other examples, were all linked to early modern humans. In the absence of any unambiguous evidence to the contrary, scientists assumed all cave paintings everywhere were likewise the handiwork of *H. sapiens.*

But in 2012 researchers led by archaeologist Alistair Pike, now at the University of Southampton in England, made a discovery that challenged this assumption. The team dated dozens of paintings from caves in Spain and found several that were rather older than previously thought. One image, a red disk in El Castillo cave, was found to have a minimum age of 40,800 years—old enough to possibly be the work of a Neandertal, and almost too old to be a modern human creation. (*H. sapiens* is not thought to have reached western Europe until around 42,000 years ago.) At a press conference announcing the 2012 findings, study co-author João Zilhão of the University of Barcelona declared any art from Europe that is found to be more than 42,000 years old must be attributed to Neandertals.

Six years later, that day has come. In the new study Pike, Zilhão and their colleagues dated paintings in three caves located in different regions of Spain: La Pasiega in Cantabria, Maltravieso in Extremadura and Ardales in Andalucía. Although the caves contain a mix of figurative and nonfigurative images, the researchers focused their efforts on the latter variety. “We found in our 2012 study that the earliest dates we were getting were on red nonfigurative art—lines, dots, symbols and handstencils—so for [this] project we focused on paintings similar to these,” Pike explains.

As in the 2012 study, the team determined the age of the paintings using a radiometric technique called uranium–thorium dating, which is based on the radioactive decay of uranium into thorium over time. Specifically, the researchers obtained samples of the thin crusts of carbonate that have formed on top of the paintings and analyzed their thorium content to gauge the age of the crust, which provides a minimum age for the underlying painting. Their efforts were richly rewarded: The analyses show all three caves contain paintings dating to at least 64,800 years ago. Neandertals across Spain were thus making rock art more than 20,000 years before modern humans set foot in Europe.

Outside researchers praised the new study. “Wow!” says Genevieve von Petzinger, a PhD candidate at the University of Victoria in British Columbia whose research focuses on prehistoric symbols. She notes that when Pike and his collaborators raised the possibility of Neandertal artists in 2012, they got a lot of static from their peers who argued there was no reason to credit Neandertals over modern humans for the El Castillo images. “This is the mic drop,” Petzinger says of the newly dated paintings. “At 65,000, there’s no way it’s modern humans.”

Not only do the dates point to Neandertals making the art, they indicate Neandertals came up with these ideas on their own. When archaeologists first began uncovering signs of Neandertal symbolism, the evidence all came from the tail end of the Neandertals’ reign, by which point modern humans had established themselves in Europe. Some researchers posited that Neandertals were simply copying their modern human neighbors, possibly without really understanding what they were doing.

The new dates have convinced proponents of this idea otherwise. “I think that the most parsimonious explanation on current evidence is that it is Neanderthals that must be making these representations,” says Thomas Higham of the University of Oxford in England, who has been dating sites across Europe to develop a chronology of the displacement of Neandertals by modern humans, and who was not involved in the new study. “I say that as someone who has long held the view that incoming modern humans, overlapping with Neandertals upon arrival [around] 45,000 to 40,000 years ago, were responsible for the late development of Neandertal symbolic behavior (perhaps a kind of 'imitation without understanding') just before their disappearance.”

Could the ancient paintings instead signal *H. sapiens* reached Europe earlier than the fossil record indicates? After all, recent discoveries elsewhere in the world have suggested our species originated and began spreading out of Africa thousands of years earlier than previously thought. “It’s possible,” Higham says, “but there is no evidence for it yet.”

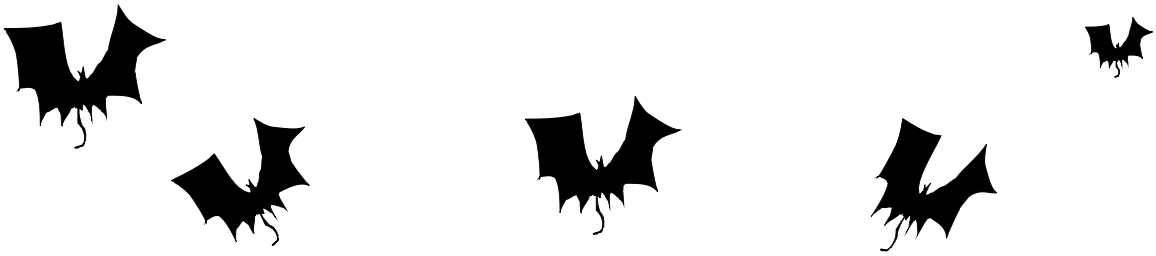
If Neandertals had cave painting traditions, then researchers will need to grapple with the question of whether their behavior actually differed from that of modern humans in any meaningful way. One school of thought holds moderns were able to displace Neandertals by virtue of superior intellect and symbolic capabilities, including language.

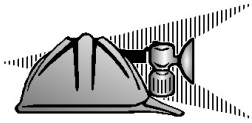
Some experts have dismissed previous examples of Neandertal art, such as the Gibraltar hashtag engraving, as predictably unimpressive compared with the figurative art modern humans made. Von Petzinger disagrees. “When researchers joke about the sophistication of Neandertal art, I think they’re missing the point,” she says. “The big cognitive leap is making the graphic mark; it’s the ability to store information outside the body.” In a general sense, she says, the creation of abstract signs “marks the first step toward written language.”

“What is now needed is a wide-ranging analysis of other cave art using the same techniques to explore other potential cases,” Higham says. Pike and his team are looking to do exactly that. “Hand stencils dots and disks are found in caves all over Europe,” Pike notes. “We would like to start dating art outside Spain to see if Neandertal painting was as widely distributed as Neandertals were.

Central Oklahoma Grotto is a non-profit organization and a chapter of the NSS (National Speleological Society), Cave Avenue, Huntsville, AL., 35810. Dedicated to cave conservation and safety, C.O.G. published general information in a monthly newsletter ($6.00/year) and detailed cave surveys and related Speleological items in a yearly publication, *The Oklahoma Underground* ($3-$8/issue) Membership is by sponsor and is $12 per year for adults, $6 for spouses and students, and $3 if under 18. Central Oklahoma Grotto meets once a month on the second Friday of each month. For information, write Lil Town, 25692 Mosier Circle, Conifer, CO 80433: All submissions to the newsletter should be sent to the editor: Lil Town, 25692 Mosier Circle, Conifer, CO 80433: Telephone: (580)471-1238: E-mail: cavemoose@gmail.com. The deadline for submissions for any particular month's issue is the 20th day of the previous month. If you wish material returned. Please include a SASE with submission. All materials in this newsletter is available for reproduction, provided proper credit is given with the article when you print it. Trade publications are welcomed. *Cave softly and safely!* Website: http://www.okcavers.com

The March meeting will once again be at the home of John Talbot Friday, March 9, 2018





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